

**Eastern Great Basin Coordination Center
Fire and Aviation Safety Team (FAST)
Final Report
July 4, 2012**

FAST Members

Rowdy Muir (USFS) Team Leader
Ted Mason (USFWS) Fire Safety Specialist
Dennis Terry (BLM) Fire Operations Specialist
Derrek Hartman (BLM) Aviation Specialist
Garrett Kirpach (BLM) Scribe

Introduction

On June 29, 2012 the Great Basin Multi-Agency Coordinating Group (GBMAC) ordered a Fire and Aviation Safety Team (FAST) to visit several large fires in Utah and Wyoming. The mission of the FAST was to gather information, provide assistance when needed and promote safe fire operations during high fire activity. The Delegation of Authority was issued to the team on June 30 and the team was in the field from June 30 to July 4. The FAST visited six Type 2 incident organizations, one NIMO team, one interagency dispatch center, and one expanded dispatch organization.

Purpose

The Team was to conduct an independent assessment and evaluation of operational and managerial activities on incidents throughout the Great Basin. These assessments also included support organizations, Dispatch Centers and Coordination Centers. The team specifically reviewed the following elements:

- a. Fatigue management and compliance with national guidance on work/rest.
- b. Effectiveness of incident support, readiness, dispatch, communications, and Coordination Center support.
- c. Incident Management Team staffing and specific safety mitigations.
- d. Effectiveness of IMT transitions, especially from extended attack or Type 3 IMTs to Type 1 or Type 2 IMTs.
- e. Safety issues arising from the use, or lack thereof, of contracted or local resources such as volunteer fire departments.
- f. Recognition by managers and incident staff of the extreme fire conditions faced throughout the geographic area and any positive or negative safety implications of response actions for initial attack, extended attack, and aviation operations.
- g. Any issues the IMT, local unit line officer or FMO ask the team to address.
- h. Consistent utilization of Dutch Creek Protocols.

Schedule

June 30, 2012 FAST team arrived at EGBCC and received the Delegation of Authority from GB MAC. Traveled to Nephi, UT.

July 1, 2012 Visited Clay Springs Fire and Wood Hollow Fire. Traveled to Price, UT.

July 2, 2012 Visited Seeley Fire and Church Camp Fire. Traveled to Vernal, UT.

July 3, 2012 Visited Wolf Den Fire and Fontenelle Fire. Traveled back to Salt Lake City, UT.

July 4, 2012 Finalized report and closed out with EGBCC.

Methods and Procedures

Incident Commanders were contacted prior to each visit. It was emphasized during initial contact that the FAST mission was to gather information for trend analysis and to promote safe fire operations. With approval, the FAST scheduled and facilitated an in-briefing with the IC, agency administrators and other command and general staff. Safety related issues outlined in the Delegation of Authority were discussed. Due to the distance between ICPs and their fires the FAST team did not make fireline visits but did conduct interviews with appropriate personnel. The FAST team then held a closeout meeting with IC and other command and general staff.

Safety Issues

Heat Related Illness

This is a serious concern for all fires. There have been numerous visits to the Medical Unit and several heat related medical evacuations. The FAST struggled to pinpoint a direct cause for this high number of incidents. Many responders are out of region Type 2 crews, not use to high elevations, high temperatures, low relative humidity, and extreme burning conditions. When questioned, the Medical Unit Leaders consistently identified four potential causes for these incidents:

- The affected personnel were not adequately acclimated to the local elevations and the heat illness is related to altitude sickness.
- The general physical fitness level of the assigned Type 2 crews is trending lower than in past years.
- An increase in the excessive consumption of electrolyte replacement drinks (Gatorade, Powerade, and Vitamin Water).
- Energy drinks (Red Bull, Monster, and 5 Hour Energy) and poor dietary habits in general are affecting the metabolic systems of firefighters.

All IMT's are trying to mitigate these hazards with thorough safety briefings, heat related illness information in IAP's, and fireline supervision.

Firefighter Fatigue/Chronic Fatigue

Firefighter fatigue issues are being mitigated on the incidents by adhering to the NWCG work/rest, and length of assignment guidelines. Long term, acute fatigue issues have not been a concern as of yet.

Dutch Creek Protocols

The FAST reviewed each IMT's emergency medical evacuation plans and found that the Dutch Creek protocols are being promoted and adhered to. In most cases, the teams have printed the standard communication process in the IAP and the pink IRPG insert is being widely used by most fireline supervisors. The time/distance to medical assistance (the "golden hour") is being discussed frequently and is being used in the risk management process when determining personnel assignments.

Extreme fire behavior

The extreme fuel conditions in the Great Basin are hampering suppression efforts with rapid rates of spread, high probability of ignition, and long range spotting. IMTs noted the Great Basin has not seen fire behavior this extreme since 2006. Since some fireline supervisors (Engine and Crew Bosses) started their careers after 2006, they are witnessing fire behavior that they have never seen before. The probability of under-estimating potential fire behavior is high. These conditions have been recognized by the command and general staff we encountered and are being discussed daily at the briefings and documented well in IAPs.

Energy Development Hazards

Over the last decade we have seen an increase in oil and gas production facilities and pipelines both above and below ground that are now affecting tactical decision making on the incident. More and more firefighters are seeing these facilities without standard operating procedures and hazard mitigations. IMTs were forced to seek safety information and training from the energy companies. This information should be gathered and developed pre-season and included in the standard team in-briefing.

OSHA issues

The FAST could not identify any significant safety issues related to OSHA regulations.

Operational Issues

Heavy Equipment

There is little in the way of heavy equipment available within the geographic area that is signed up and available within dispatch priority lists (DPLs). Competition with commercial interests in the field of energy (coal, oil and gas) has led to a lack of interest in signing up heavy equipment for the fire season. In addition there aren't enough qualified equipment inspectors within the

geographical area. More resources in the geographical area need to be trained to become equipment inspectors

Logistics

As large fire activity increases, logistical support for supplies, such as saw gas and drip-torch mix take longer to reach incidents from expanded dispatch/buying teams. Need to explore the option of creating expanded dispatch teams within the Great Basin Area.

Another IMT expressed dissatisfaction with the policies and procedures in place at National Interagency Coordination Center (NICC) and National Incident Radio Support Cache (NIRSC) causing them to wait two full days to receive their repeaters. The Great Basin needs review the policies and procedures for ordering and shipping of a second repeater through NICC and NIRSC.

Expanded Dispatch Concerns

At the time of this report two expanded dispatches were handling three Type 2 incidents each. Some IMTs felt that the expanded dispatches were at the limits of their support capabilities. The question arose as to why the Seeley fire went through expanded dispatch out of Richfield Interagency Dispatch and not through Moab Interagency Dispatch. After further inquiries, Moab is understaffed and is currently unable to staff an expanded dispatch. The FAST team suggests ordering an out of area expanded dispatch team if fire activity increases or at least request severity funding for support dispatchers to help staff the center.

Aviation Issues

Substandard In-briefings

Several IMTs mentioned they received substandard aviation in-briefings from the local unit. Some of the specifics are as follows:

- Substandard flight hazard maps (electronic GIS layers) or no hazard maps
- Airport and facility agreements were not in place and needed to be addressed by the IMTs
- TFR was not updated to reflect fire growth.

Exclusive use helicopters (Type 2 and 3) compared to CWNs.

Prioritization and distribution of exclusive helicopters did not meet the needs of all ongoing incidents. Specifically (at the time of the interview), the Clay Springs Incident did not have an exclusive use helicopter, while the Wood Hollow Incident had 4 exclusive use helicopters with modules. The value of an exclusive use helicopter with module cannot be overstated with their qualifications, staffing and crew capabilities.

An exclusive use helicopter for the most part will come with a fully qualified HEB1 (if not more), several helicopter managers and helicopter crewmembers qualified for construction of helispots, dip-site management, sling load construction and other all helibase support workloads.

Aviation Staffing and Qualifications

It was mentioned by one incident, the abundance of HECM trainees compared to the fully qualified personal that make up a CWN modules. Some modules were made up of only trainees and no fully qualified personal at the crewmember level. It was also mentioned by one incident that a CWN (limited) helicopter was initially staffed by a helicopter manager trainee. Most out of region IMTs staff an AOBD and an ASGS, but they lack a HEB1 and even an ATGS in some cases. This stresses the importance of those exclusive use helicopters with modules, since they can provided those key positions (ABRO, HEB1, HEB2, DECK, HLCO, etc.) until dispatch can fill orders for those much needed qualifications.

Additional Aviation Notes

There was also the mention by one incident that they were not authorized rental cars for their CWN (limited) helicopter managers, which resulted in contractors giving rides and providing transportation and some logistical needs to those employees.

There were no issues found with airspace coordination, frequency management and crewmember and pilot fatigue. The Seeley and Church Camp incidents had established a temporary tower at the Price Airport, which should be encouraged as incidents operate or function in close proximity to one another.

The issue of proficiency rappels on an ongoing incident still needs to be addressed at a national level.